AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title		Nuclear Energy and Applications					
Course Code		KMY159		Couse Level	First Cycle (Bachelor's Degree)		
ECTS Credit	2	Workload	50 *(Hours)*	Theory	2	Practice	0	Laboratory	0
Objectives of the Course		To provide knowledge about basic concepts of nuclear energy, and to introduce how these energy are used and in which areas.					
Course Content		Basic concepts related to nuclear energy, nuclear techniques used for energy production, basic properties of fission, basic properties of fusion, advantages and disadvantages of nuclear technology.					
Work Placement		N/A					
Planned Learning Activities and Teaching Methods		Explanation (Presentation)					
Name of Lecturer(s)		Prof. Ömer Barış ÜZÜM					

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	20
Final Examination	1	70
Assignment	1	20

Recommended or Required Reading

1	Shreve's Chemical Process Industries, Austin, George T.
2	Çekirdek Kimyası, Gazi İREZ
3	Çekirdek Kimyası ve Radyokimya, Ali Rıza BERKEM
4	Nükleer Santraller, Dünya Enerji Konseyi Türk Milli Komitesi

Week	Weekly Detailed Course Contents	
1	Theoretical	History of nuclear technology
2	Theoretical	Basic concepts
3	Theoretical	Structure of atom and atomic theories
4	Theoretical	Radioactivity
5	Theoretical	Energy and kinetics of nuclear reactions
6	Theoretical	Fission
7	Theoretical	Midterm Exam
8	Theoretical	Nuclear fuels
9	Theoretical	Nuclear reactors
10	Theoretical	Chernobyl Nuclear Accident
11	Theoretical	Nuclear weapons
12	Theoretical	Fusion
13	Theoretical	Radioactivity units
14	Theoretical	Using areas of nuclear technology
15	Theoretical	Final Exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	2	28
Assignment	1	2	0	2
Midterm Examination	1	8	1	9

Final Examination	1	10	1	11
		Total Workload (Hours)		50
		[Total Workload (Hours) / 25*] = **ECTS**		2

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	To be able to comprehend basic concepts related to nuclear enerji.
2	To be able to comprehend nuclear techniques used for energy production.
3	To be able to comprehend the basic properties of fission.
4	To be able to comprehend the basic properties of fusion.
5	To be able to comprehend the advantages and disadvantages of nuclear technology.

Programme Outcomes *(German Language and Literature)*

1	Students will have advanced knowledge in the field of German Language and Literature in the field of German Language and Literature.
2	To be able to understand the concepts, ideas and data related to German Language and Literature through scientific methods in which he / she has learned and learned; It provides suggestions that can be proved by scientific evidence, evidence or evidence.
3	To inform the German audience about the issues related to German Language and Literature; expresses his / her own thoughts, problems / problems, solution suggestions and methods in written and verbal way.
4	Students will be able to produce scientific studies to be accepted by the experts in the field of Languages, Literatures and Cultures.
5	It carries out advanced studies independently with learning, learning skills and critical thinking.
6	Develops strategic management and implementation plans in the field of German Language and Literature and evaluates the obtained results within the framework of quality processes and uses the obtained data in interdisciplinary studies.
7	Plans and manages the activities and projects for the professional development of the people he works with in the sense of social responsibility.
8	Students will be able to follow and use the German Language and Literature knowledge and gain the competency with their colleagues.
9	It has the competence to observe social, scientific and ethical values ??in the stages of collecting, interpreting and announcing data about German Language and Literature.
10	Uses and develops information and communication technologies with the knowledge of computer software and hardware required by German Language and Literature.
11	She is able to translate from German to Turkish and from German to German so that she can speak an equivalent language and grammar.
12	Obtains the basic professional knowledge related to the learning area.